

Figure 1a

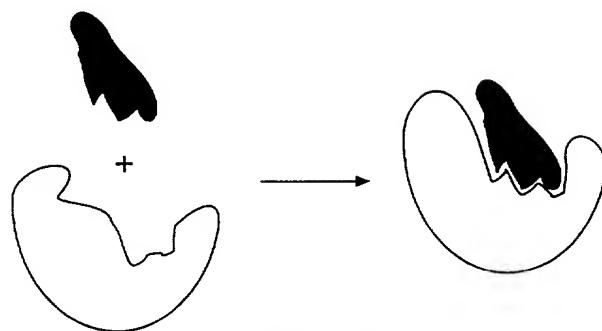


Figure 1b

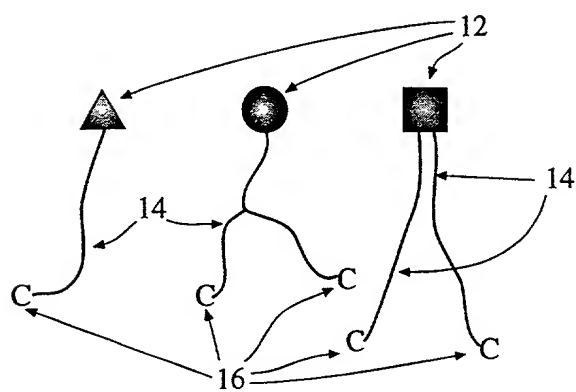
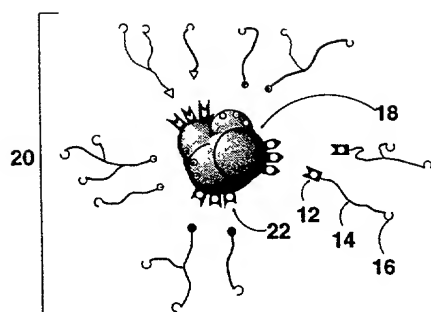
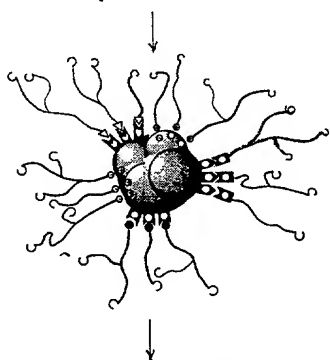


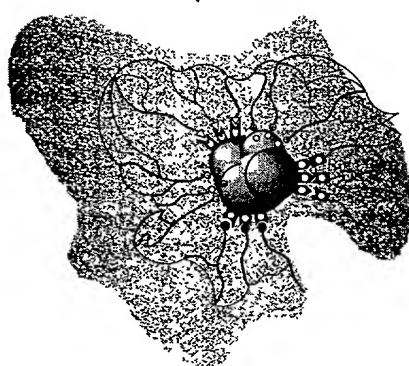
Figure 2(a)



Target Molecule Exposed  
to Monomers

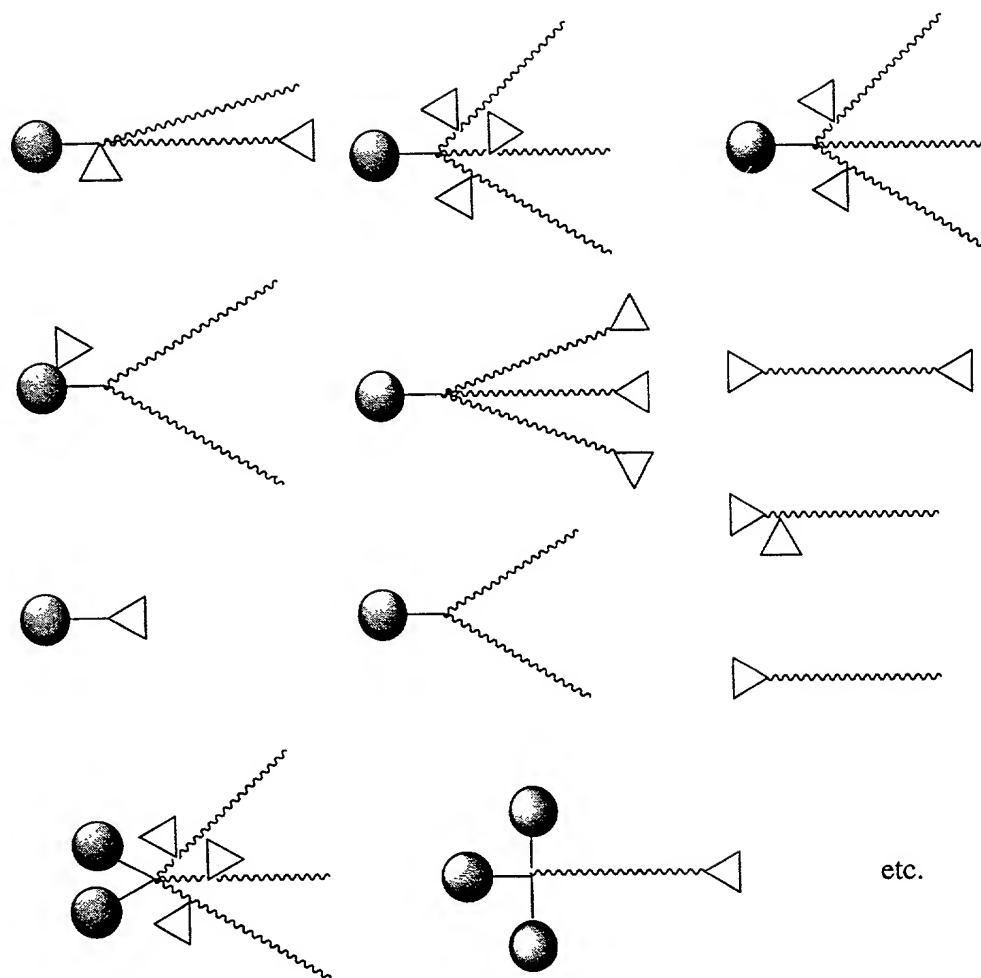


Monomer Heads  
Bind to Specific Target Sites



Monomer Tails  
Crosslink to Form SPC

Figure 2b



etc.

# Key to Shapes



Head



Crosslinking  
moieties



Tail

Figure 2c

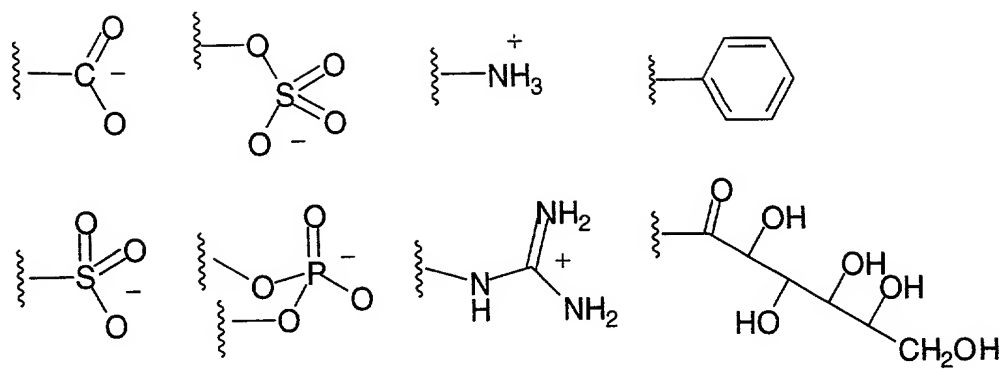


Figure 3

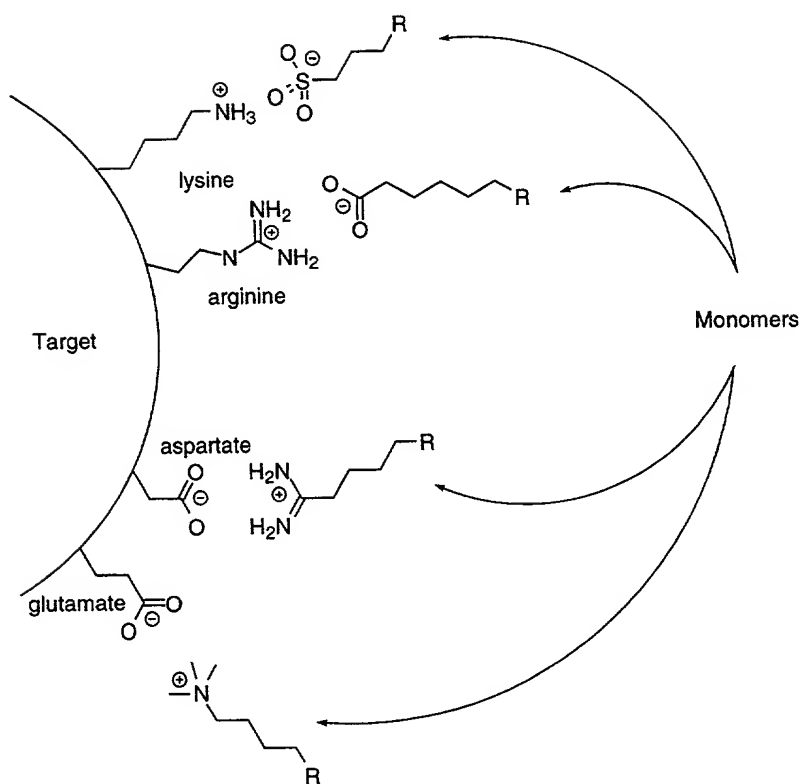


Figure 4

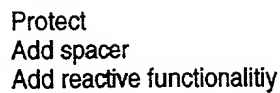
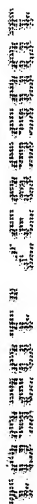
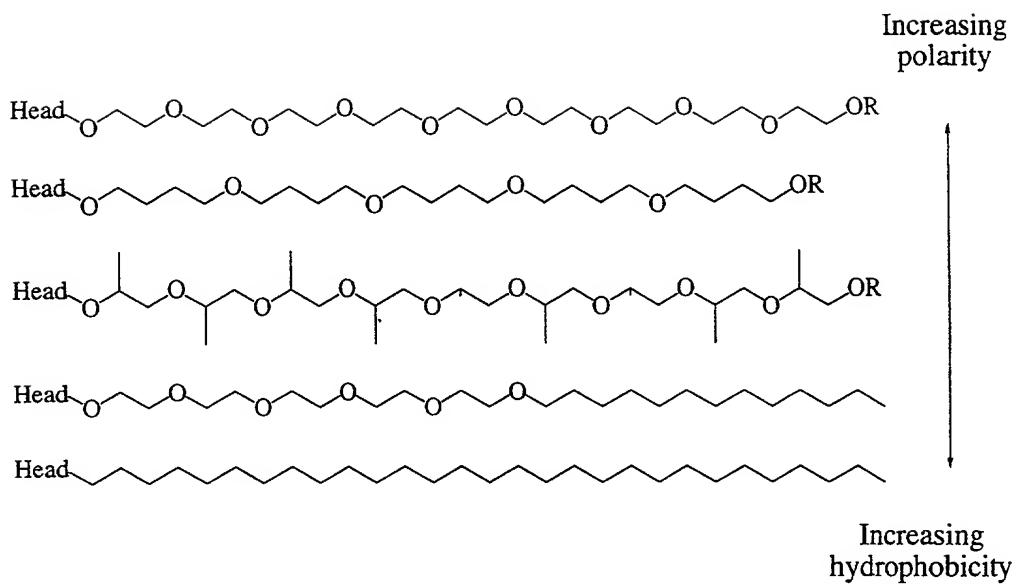
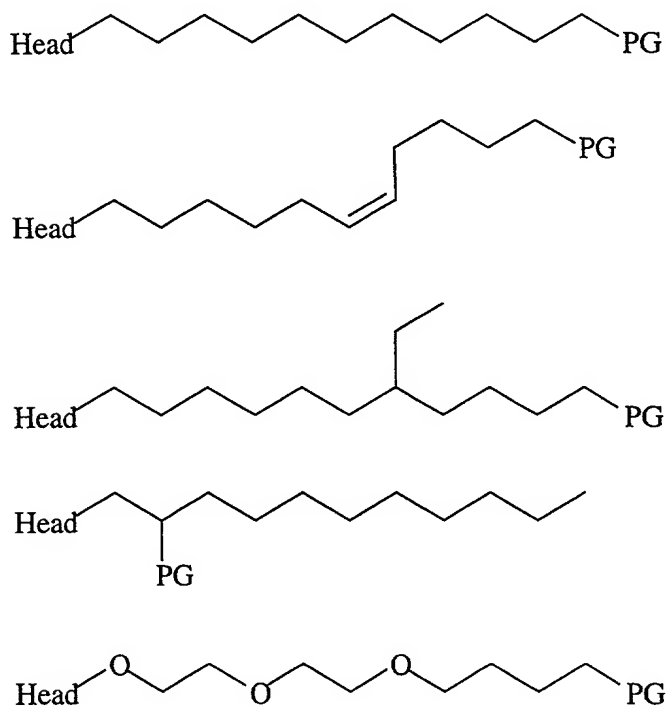


Figure 5



R = H or CH<sub>3</sub>. The polymerizable group may be attached at any point along the tail structure

Figure 6



PG = Polymerizable Group

Figure 7

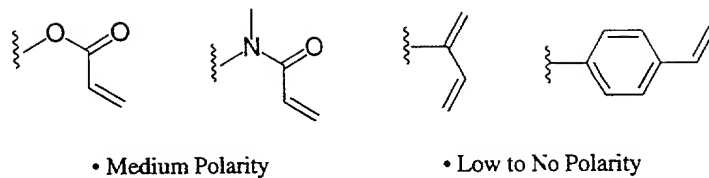


Figure 8

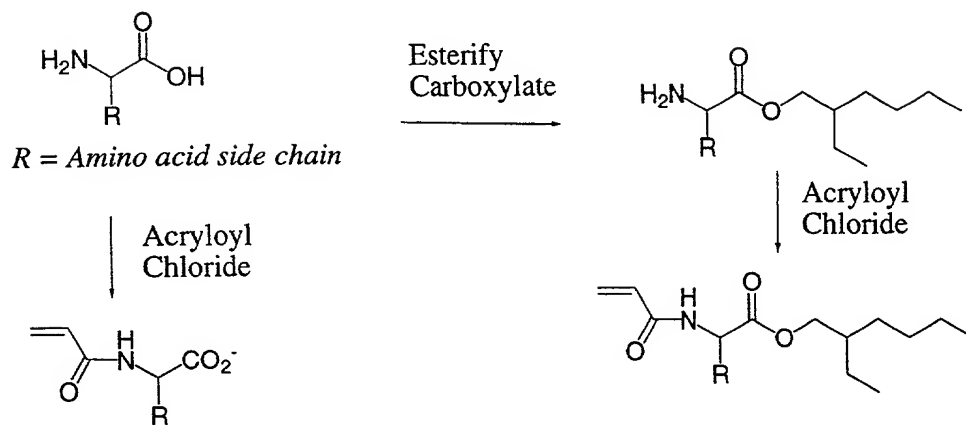


Figure 9

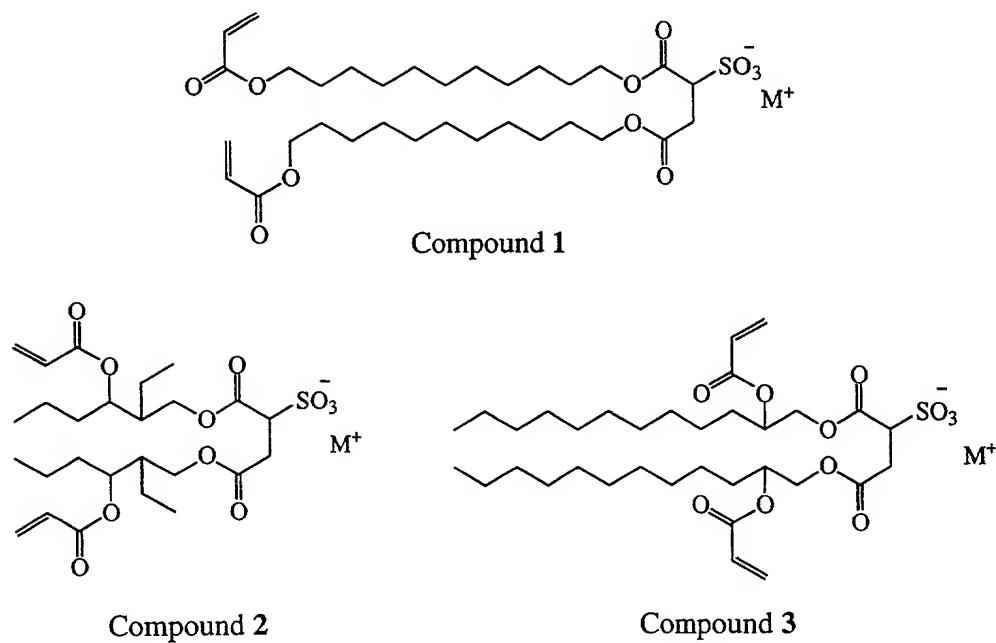


Figure 10

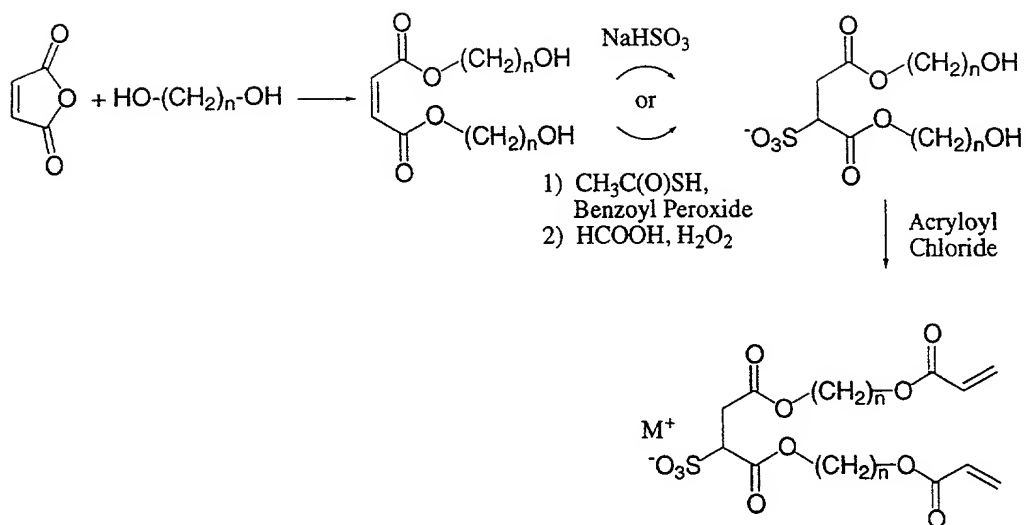


Figure 11a

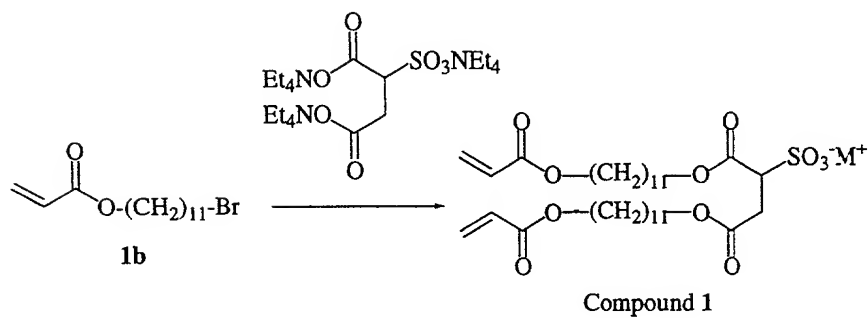


Figure 11b

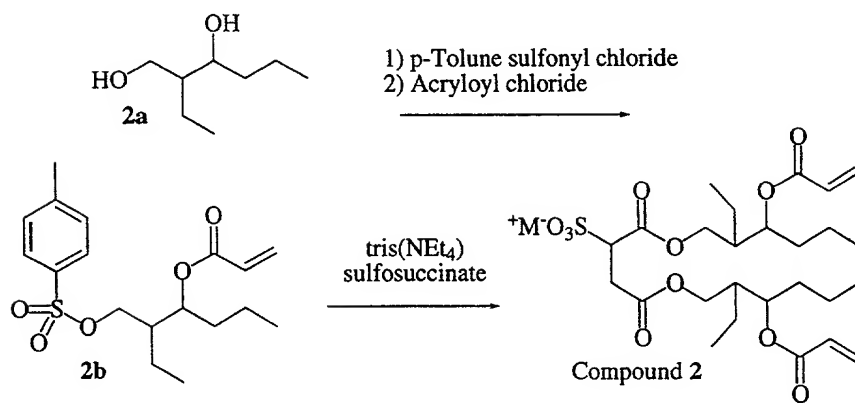


Figure 11c



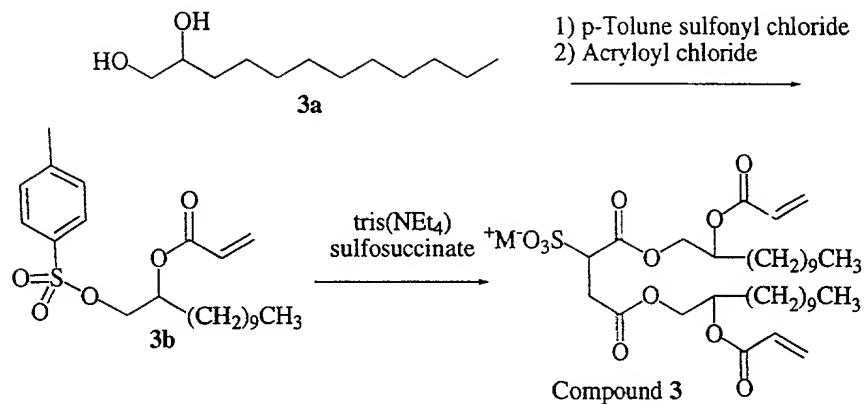


Figure 11d

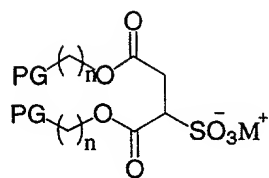


Figure 12

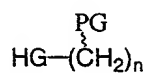


Figure 13

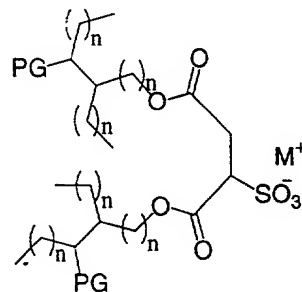


Figure 14

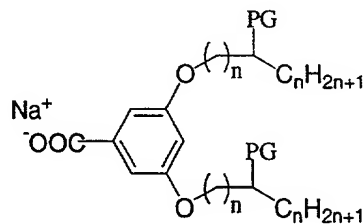


Figure 15

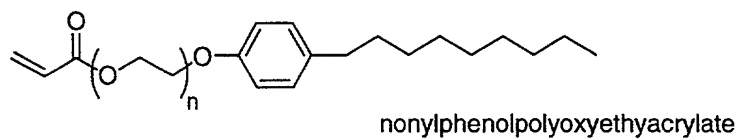
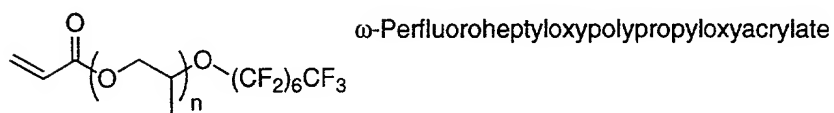
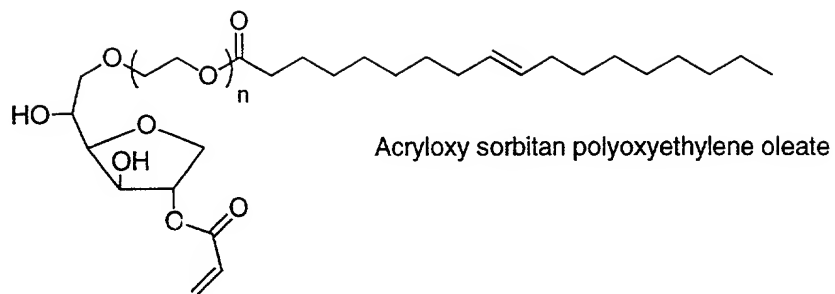


Figure 16

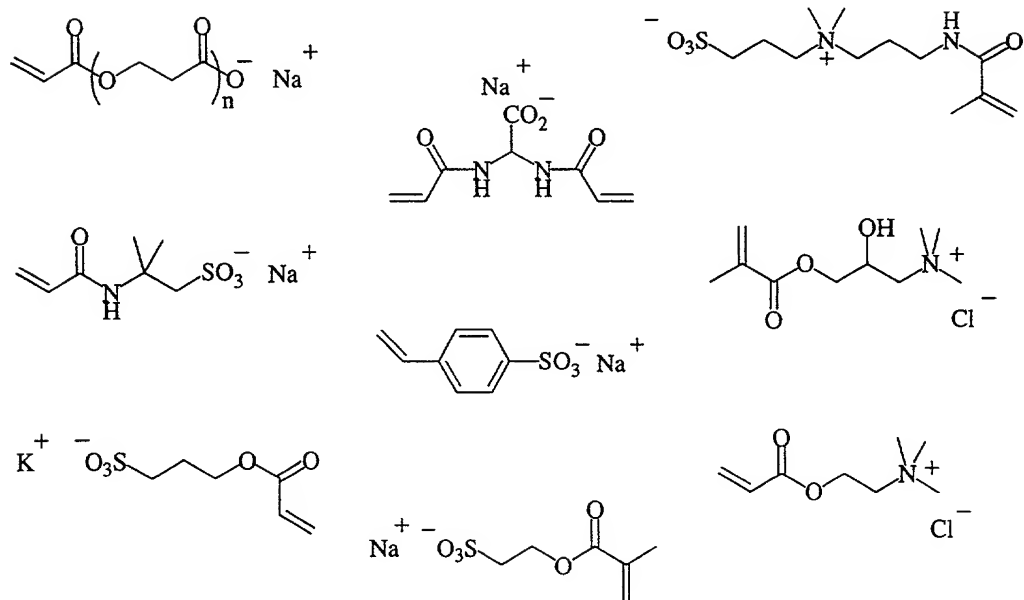
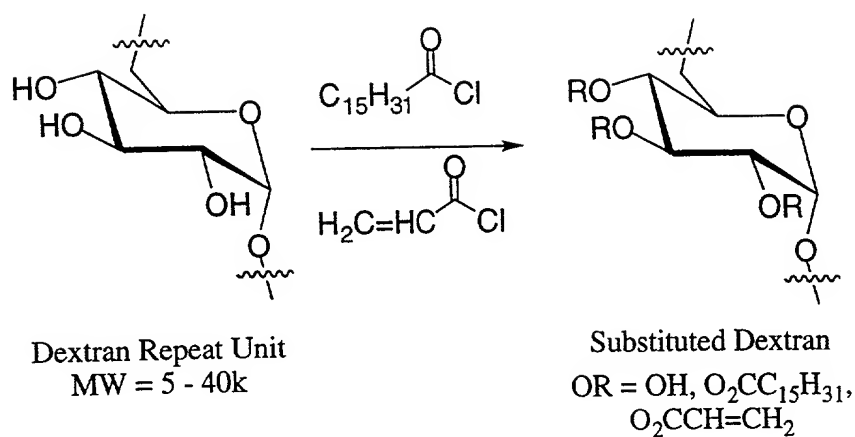
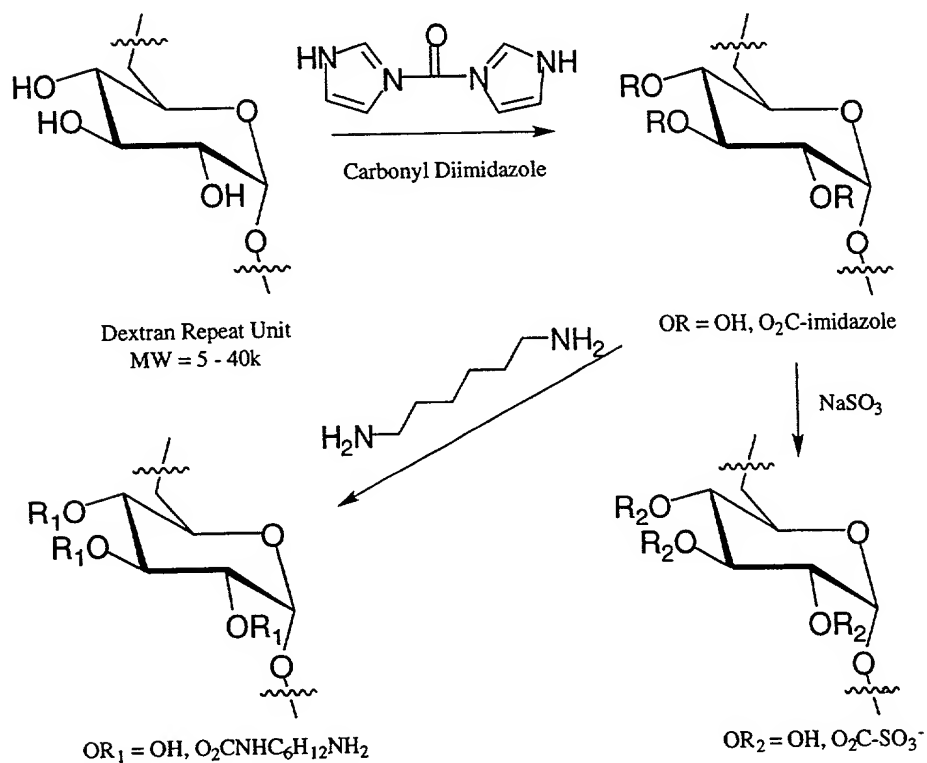


Figure 17

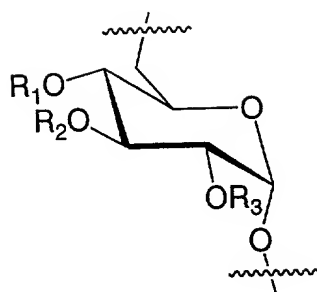


### Carbohydrate based reactive surfactants



### Addition of polar headgroups to polysaccharides

Figure 19c



Formula 6

Figure 19d

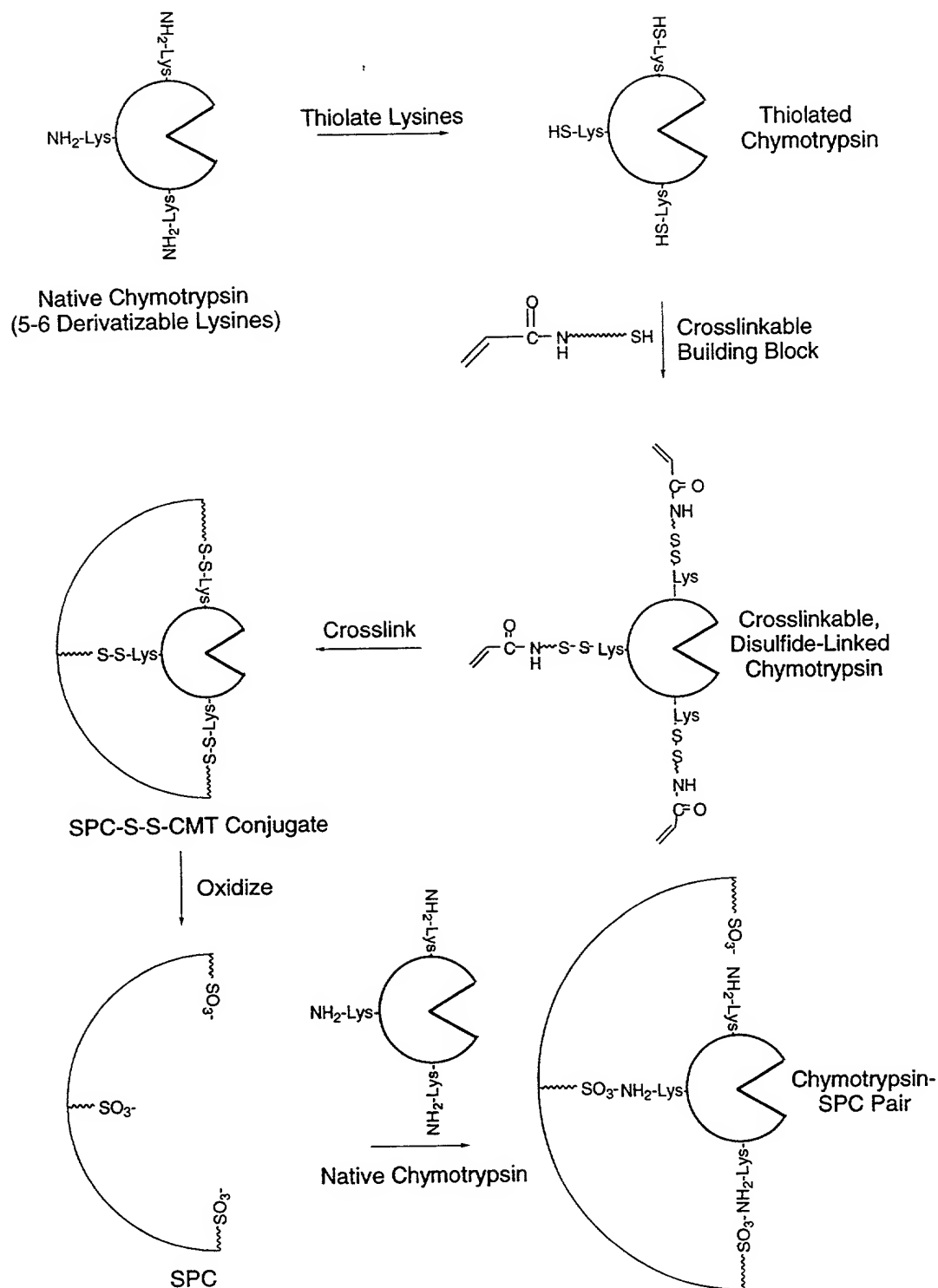


Figure 20a

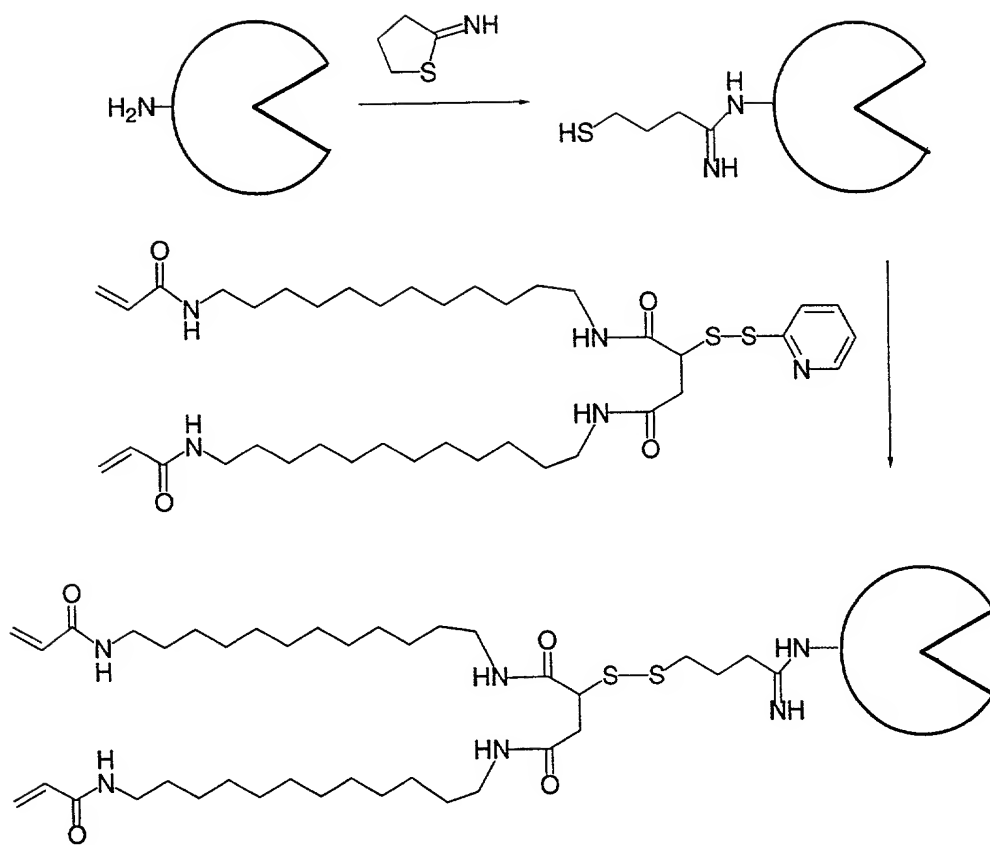


Figure 20c

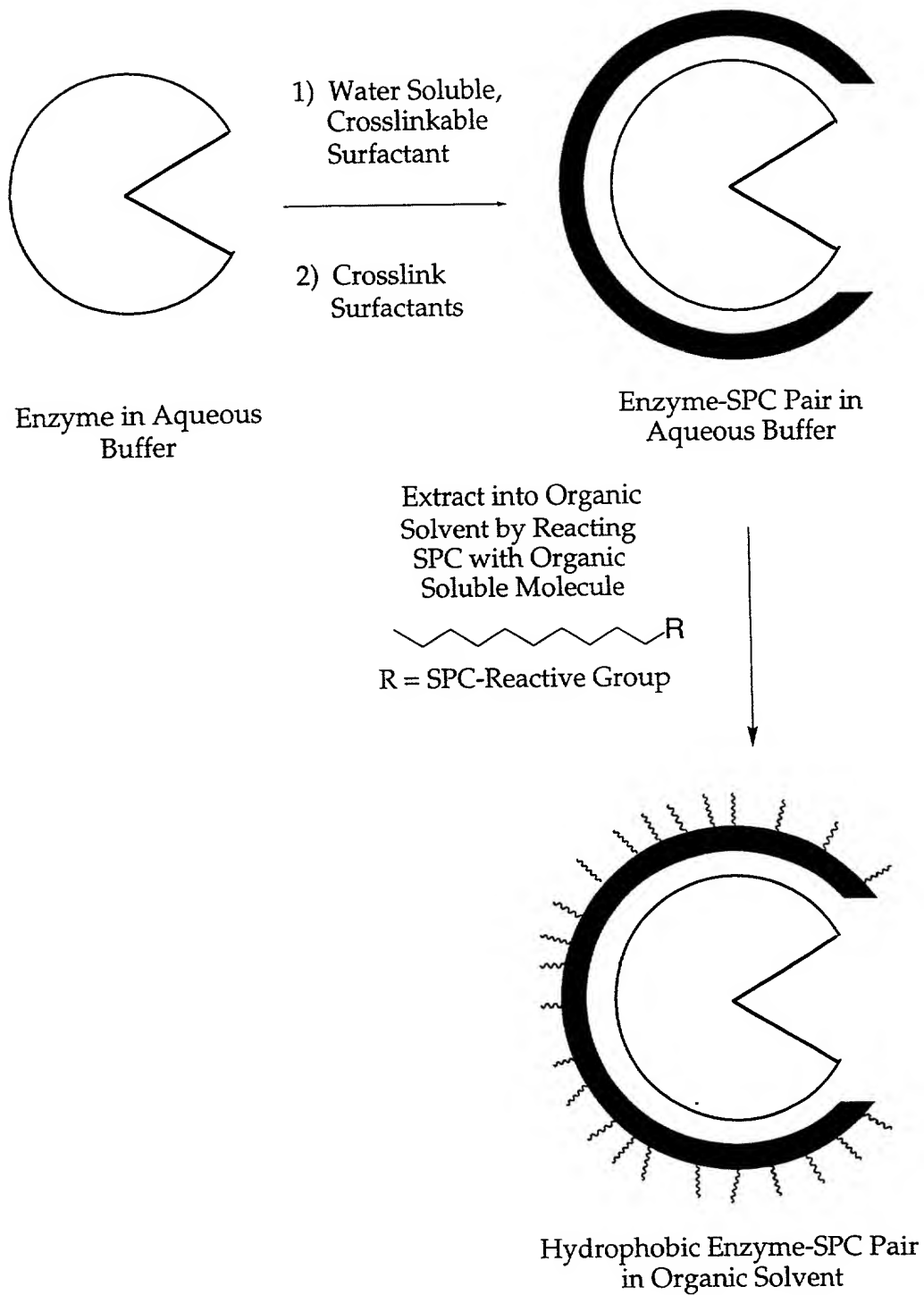


Figure 21

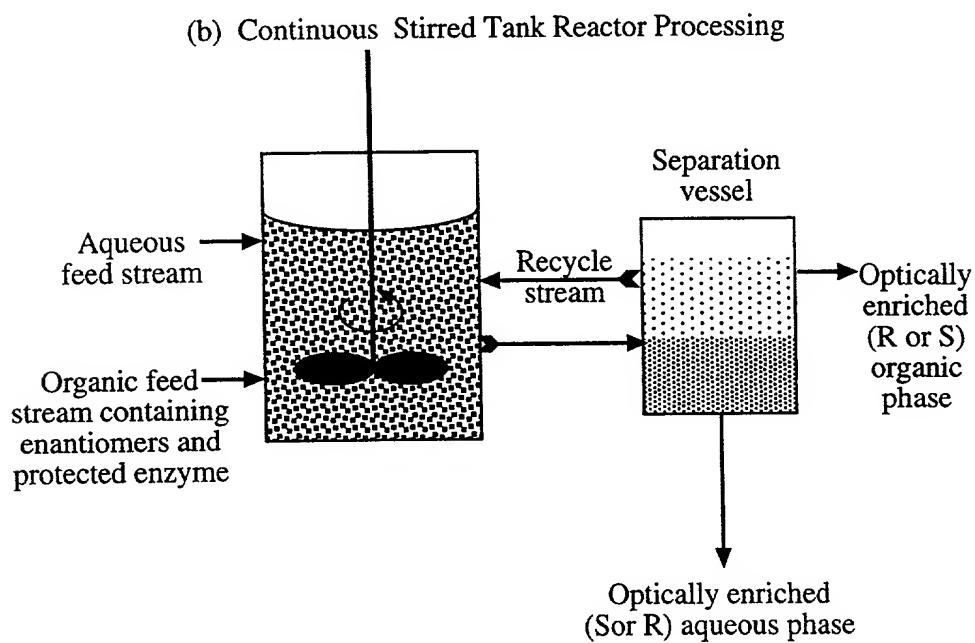
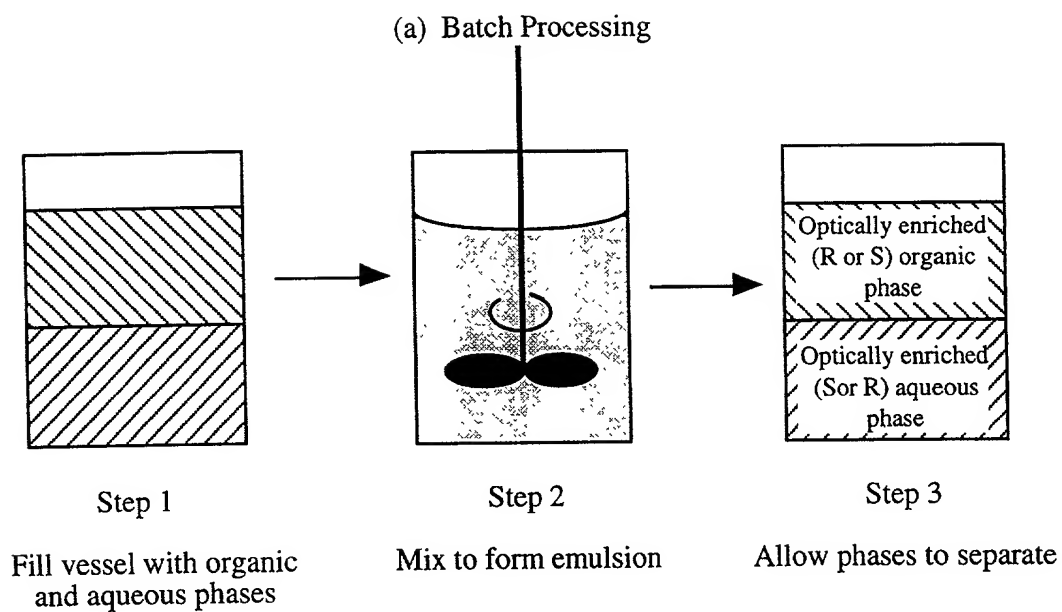


Figure 22



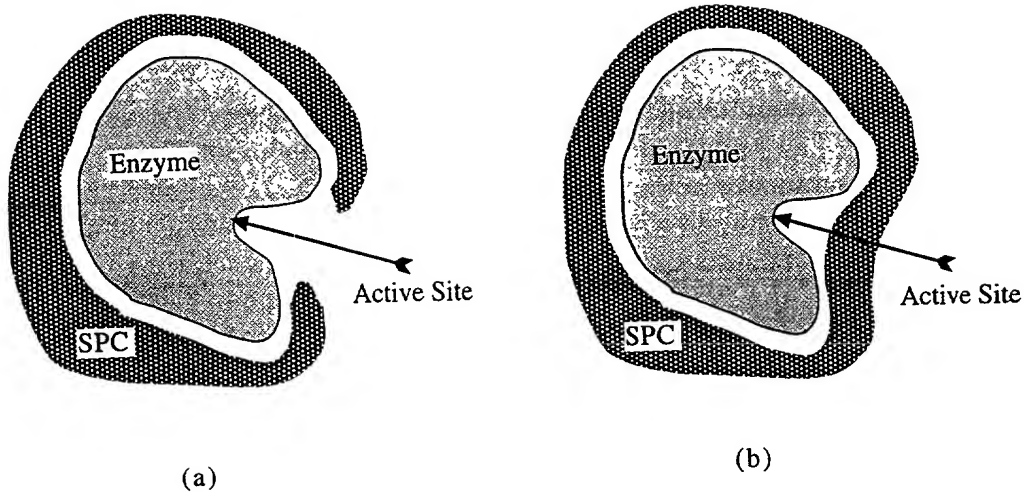


Figure 23

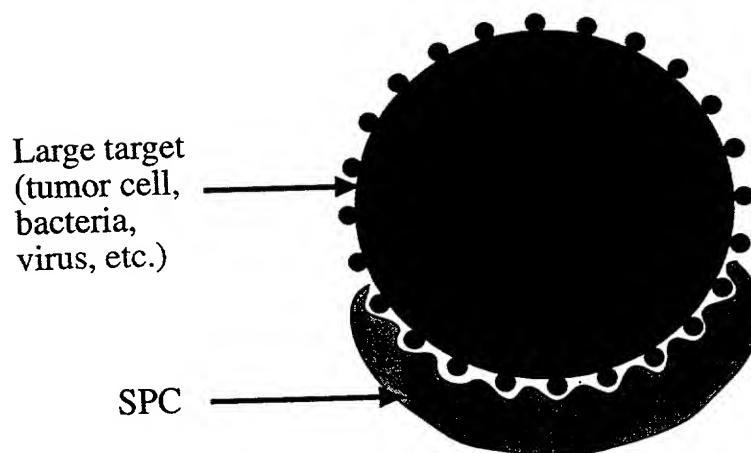


Figure 24

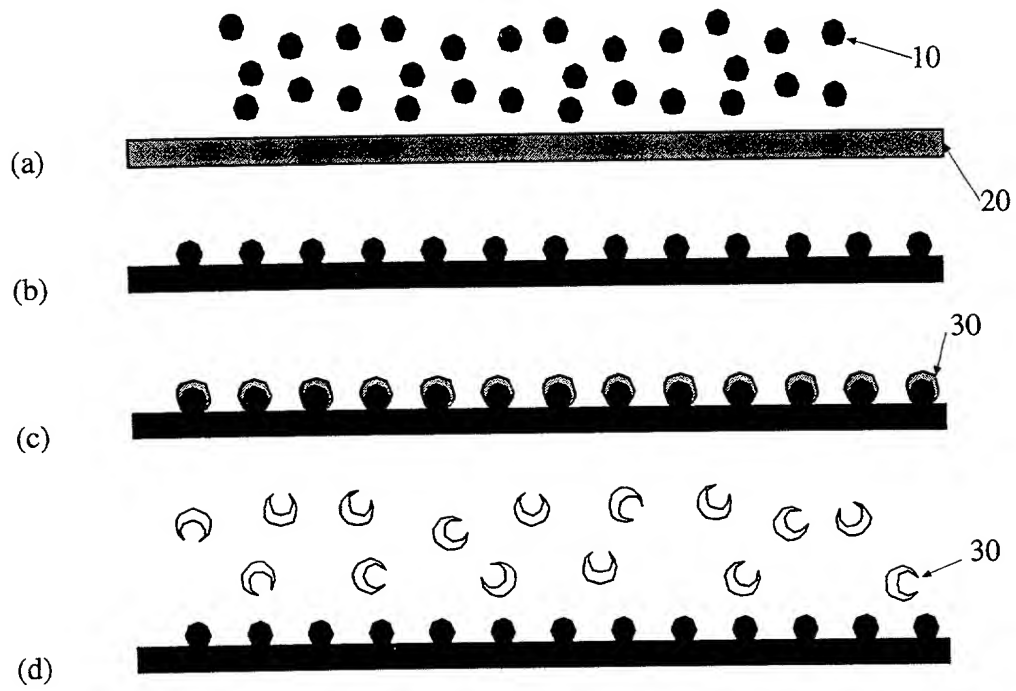


Figure 25

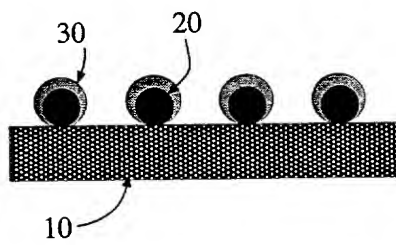


Figure 26

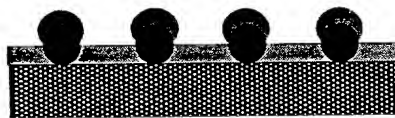
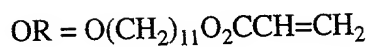
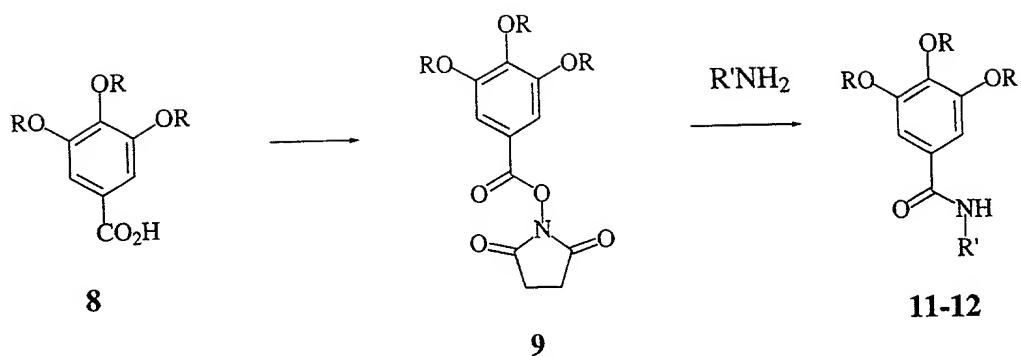


Figure 27





Exemplary Compounds **11** and **12**

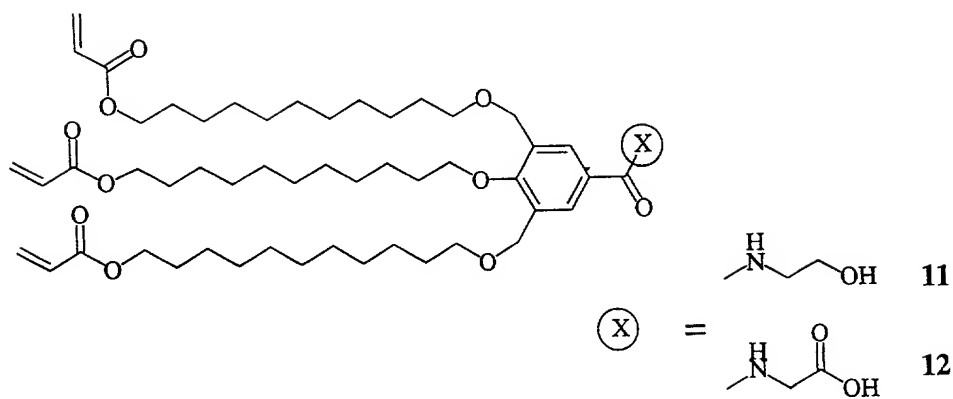
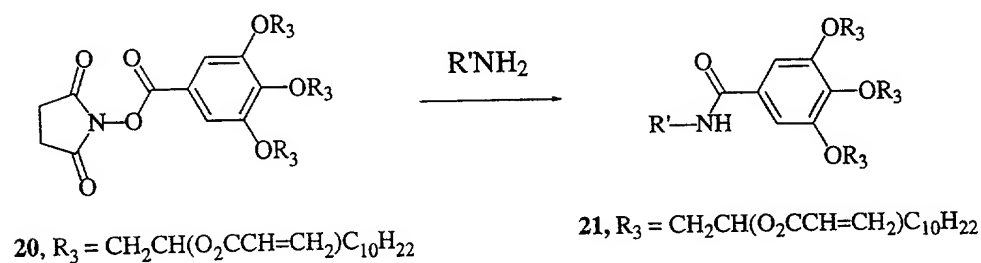
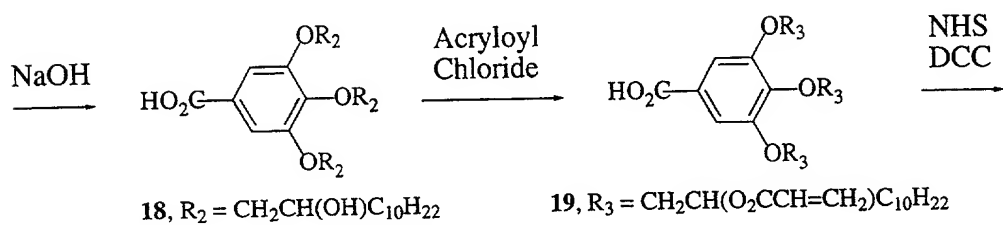
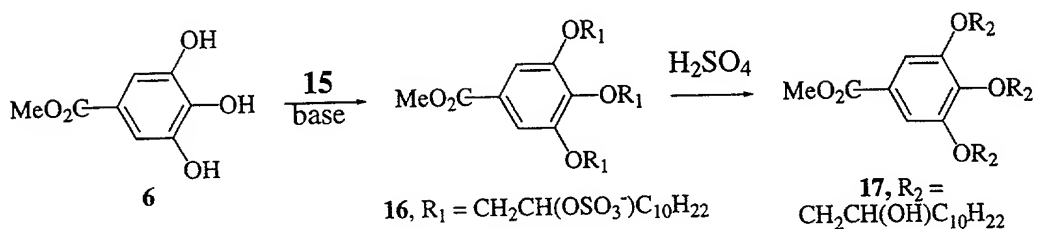
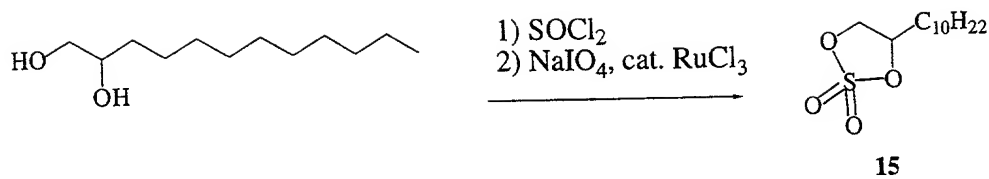
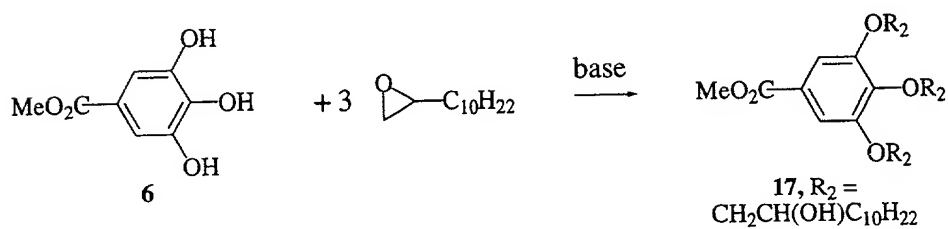


Figure 32

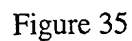
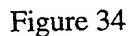


(a)



(b)

Figure 33



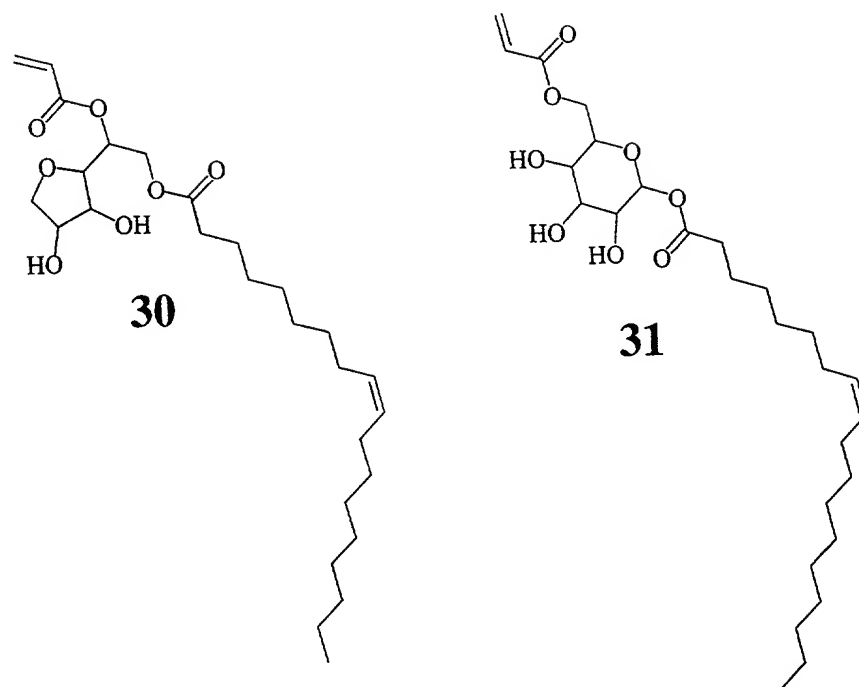


Figure 36

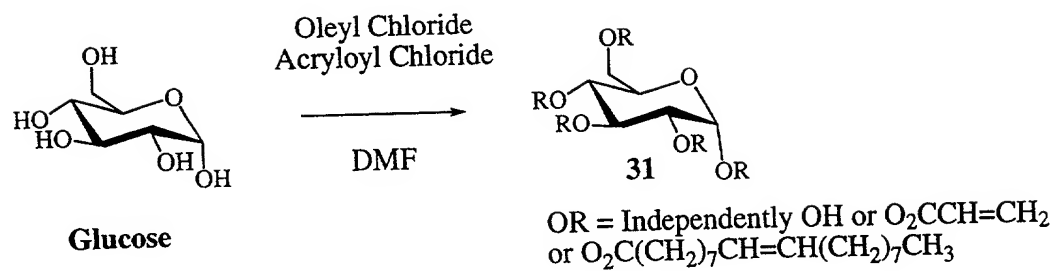


Figure 37

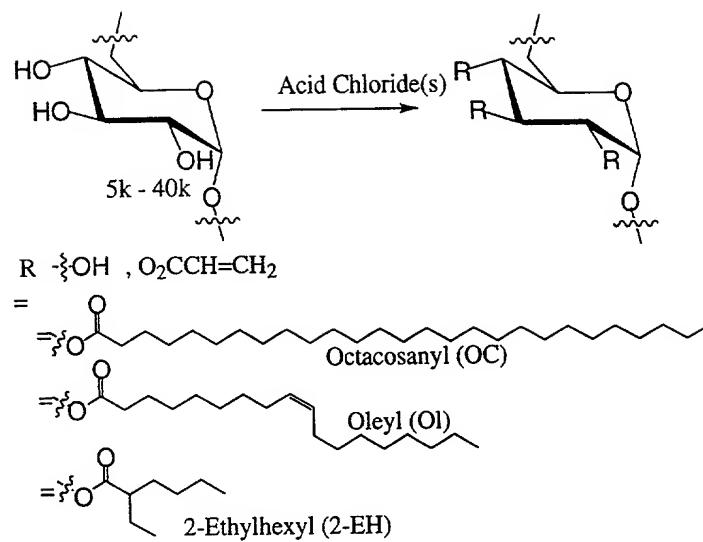


Figure 38

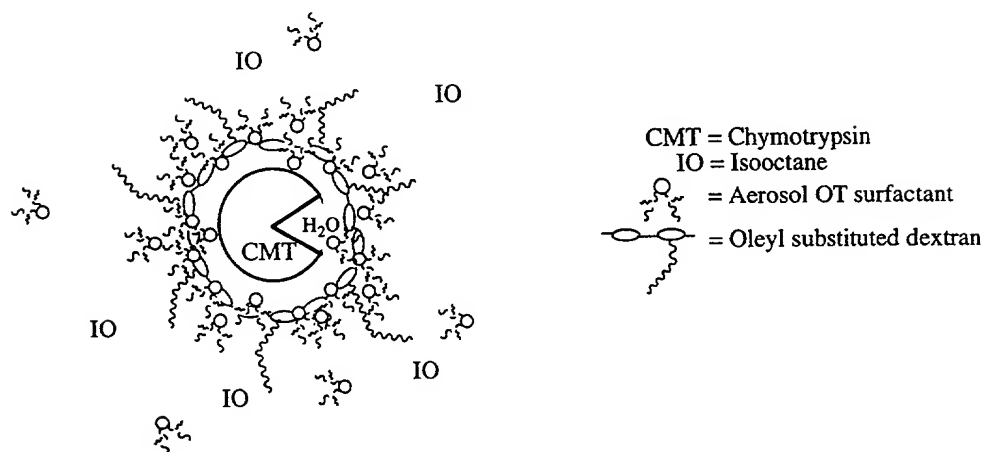
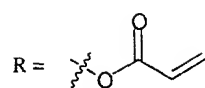
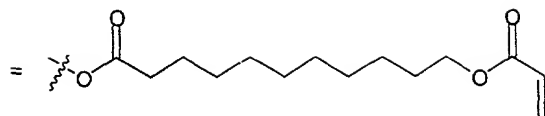


Figure 39

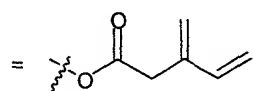




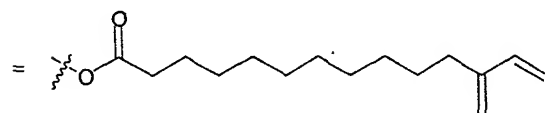
Acrylate Tail (Ac)



Acrylate Hydrophobic Tail (AcH)



Butadiene Tail (Bd)



Butadiene Hydrophobic Tail (BdH)

Figure 40

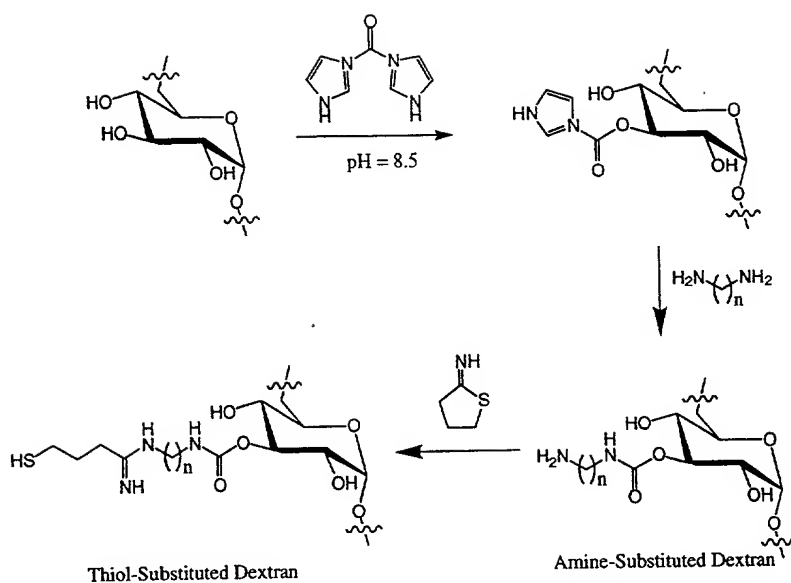


Figure 42

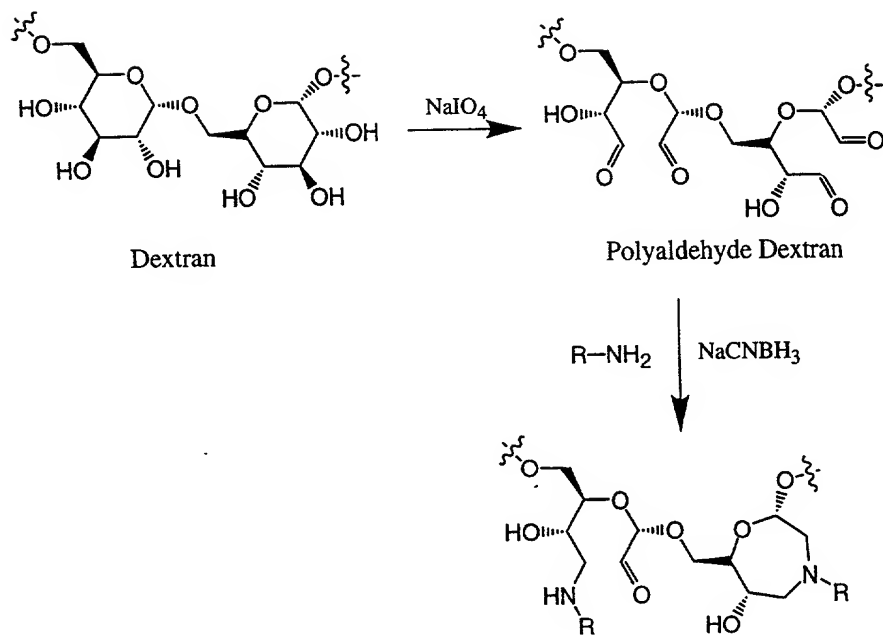


Figure 43